



Fall 2019 Capital Improvement Program (CIP) Worksessions

Public Infrastructure

November 7, 2019

AGENDA

- **Public Infrastructure**

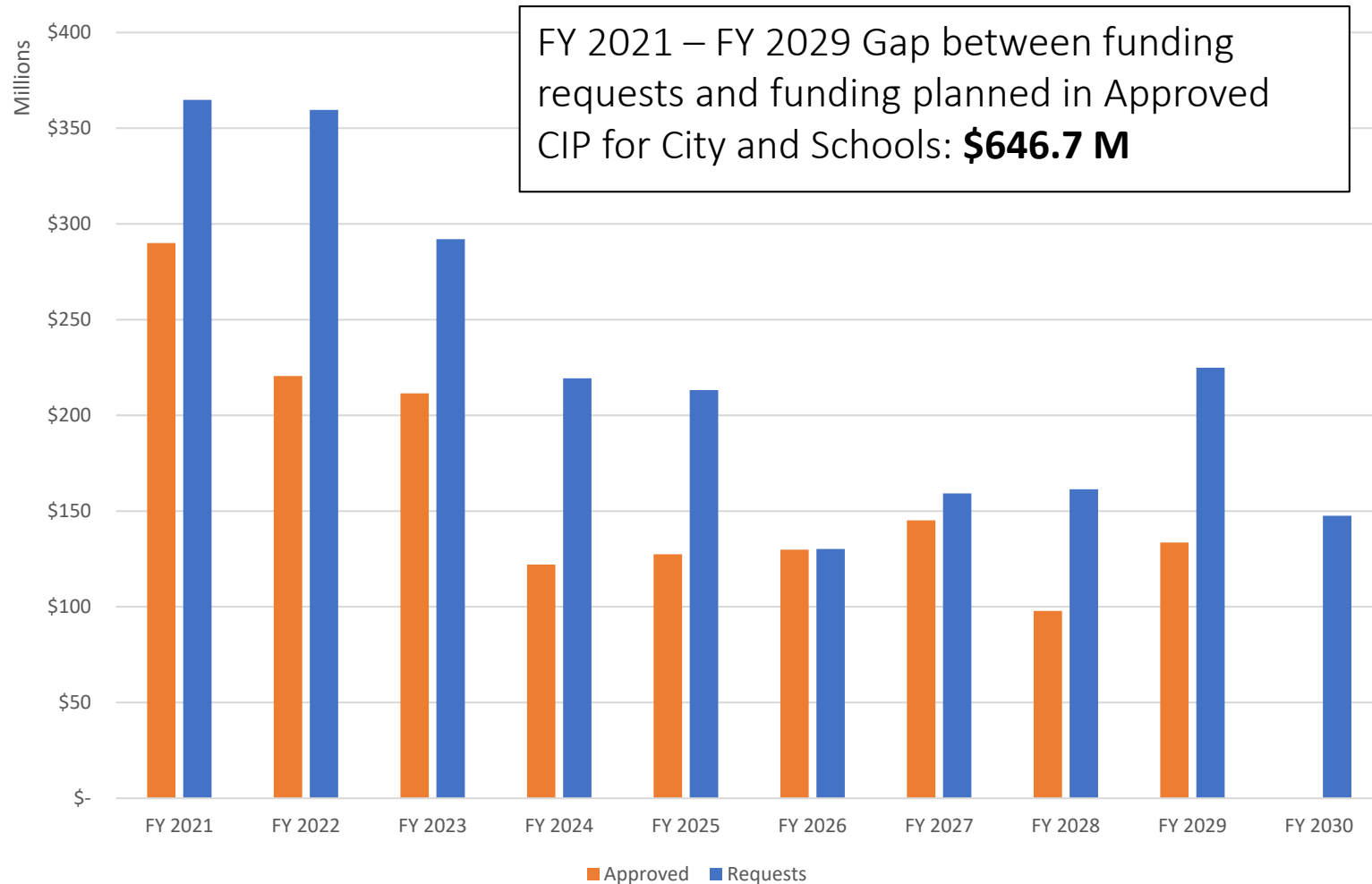
- Recreation & Parks
- Transportation
- Sanitary Sewers and Stormwater Management
- Waterfront Implementation & Flood Mitigation

NEXT STEPS

- This worksession focuses on the State of Good Repair and major projects underway or proposed for Public Infrastructure
- During this worksessions, consider the following:
 - The capital projects discussed, relative to the overall affordability of the CIP
 - Alignment of these projects with City Council's priorities

IDENTIFIED CITY CAPITAL NEEDS

SUMMARY OF FY 2021 – FY 2030 PROJECT SUBMISSIONS





Recreation, Parks & Cultural Activities (RPCA)

CIP Worksession – Public Infrastructure
November 7, 2019

What We Do



RPCA Strategic Plan 2018-2023

Mission

We enrich the City of Alexandria by creating meaningful experiences through public space, cultural activities, and programming.

Vision

We will improve the well-being of every person in our community by connecting them to each other and their environment.



RPCA Strategic Plan Focus Areas

**Connect the
Community**



**Improve
Well-Being**



**Invest in Our
Natural
Environment**



**Support a
Responsible and
Engaged
Workforce**



State of Good Repair

State of Good Repair is the point where all parks and recreation or cultural facilities are safe, clean, accessible, reliable and open to the community for their intended purposes.



Current State: Reinvestment



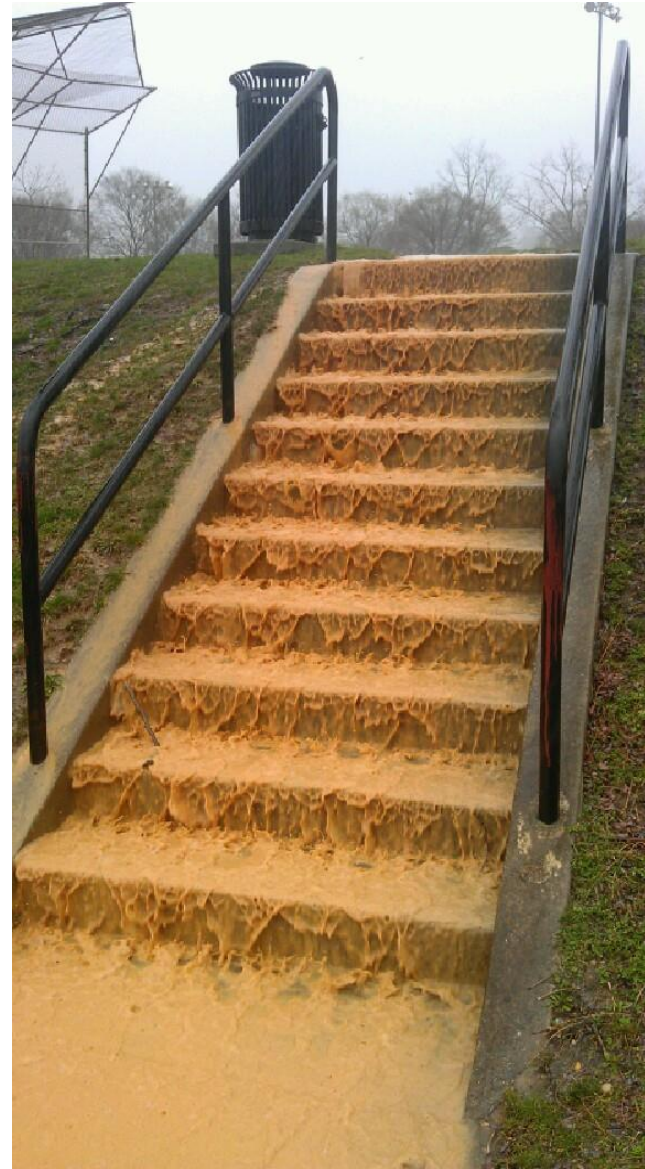
Current State: Partnership Projects



Current State: Aquatics



Current State: Athletic Fields



Execution Gaps

Fund maintenance of:

- Recreation Centers
- Newly acquired facilities from City approved Small Area Plans
- Recently renovated parks
- Newly acquired public art



Execution Gaps

Fund current CFMP programs with an increase for escalation.

Increase CFMP funding for public pools and public art to address existing infrastructure needs.

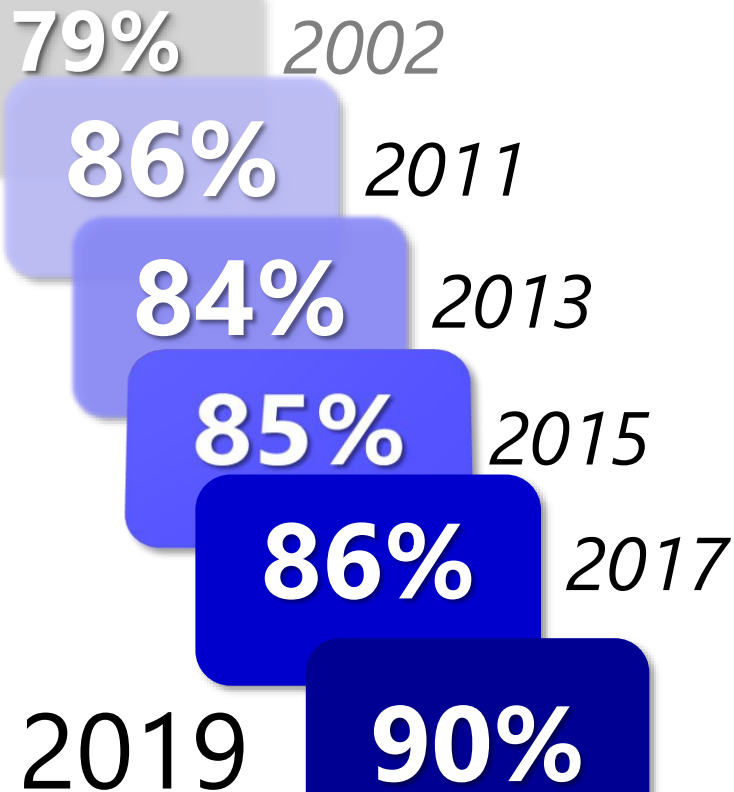
Increase CFMP funding to include contingency to address market fluctuations and new regulations.

Fully fund requests to complete Citywide, Neighborhood and Pocket Park Plans.

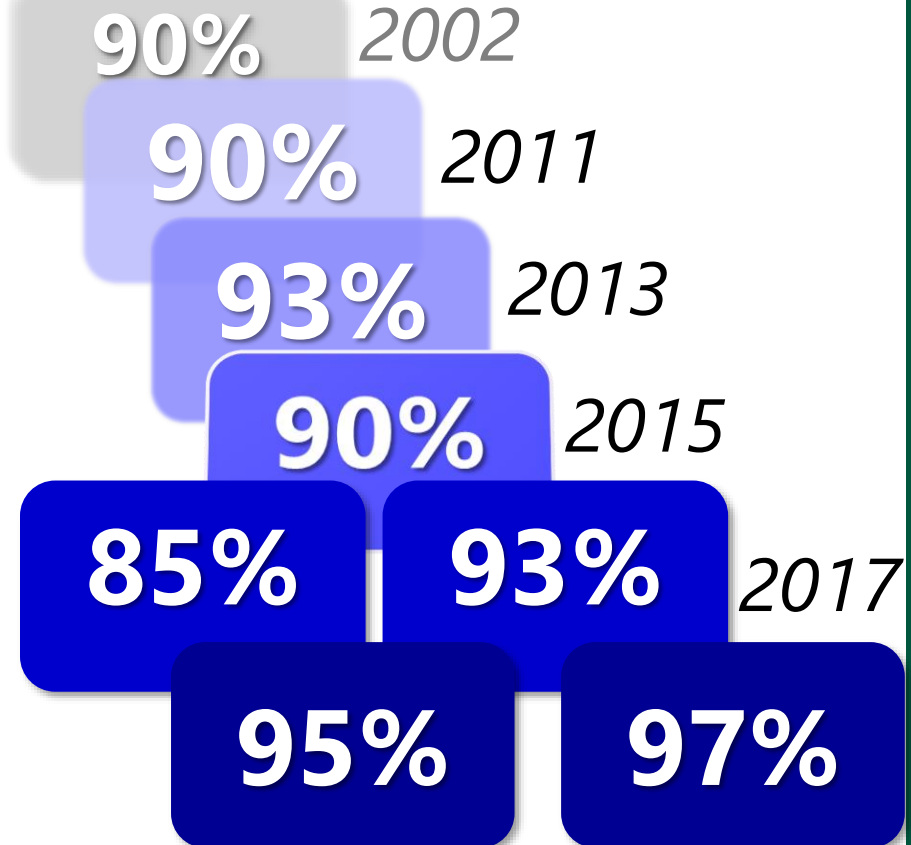


Community Satisfaction Measures

Parks



Programs or Events



Recreation Facilities

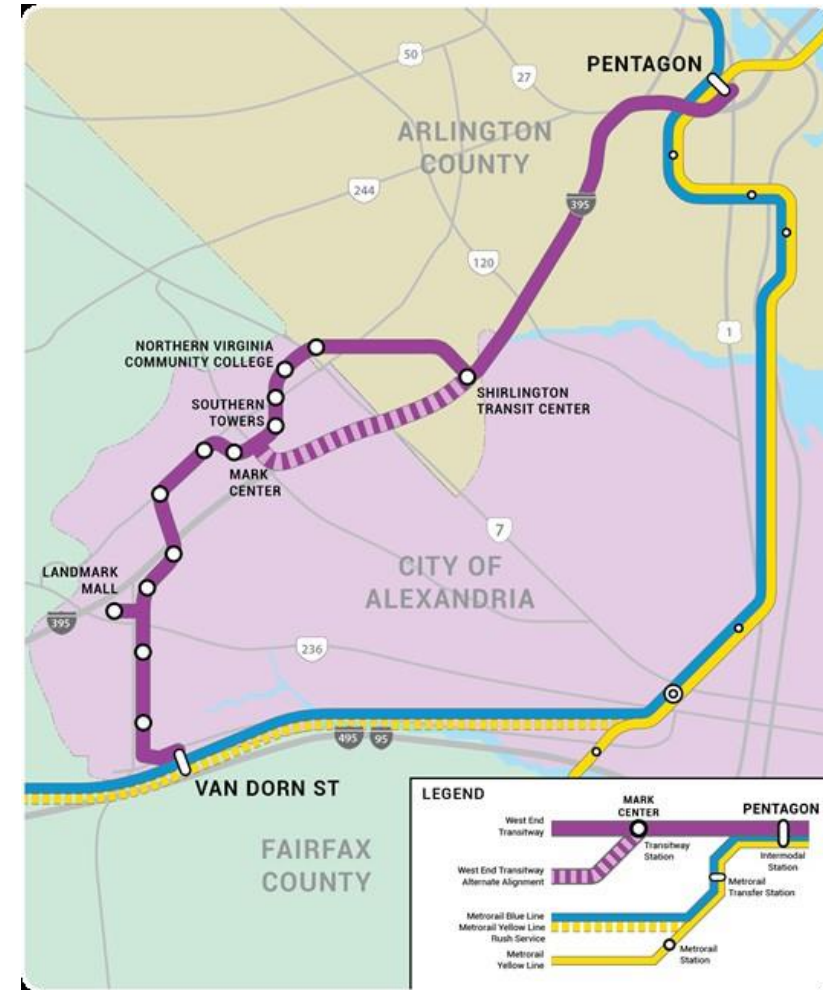
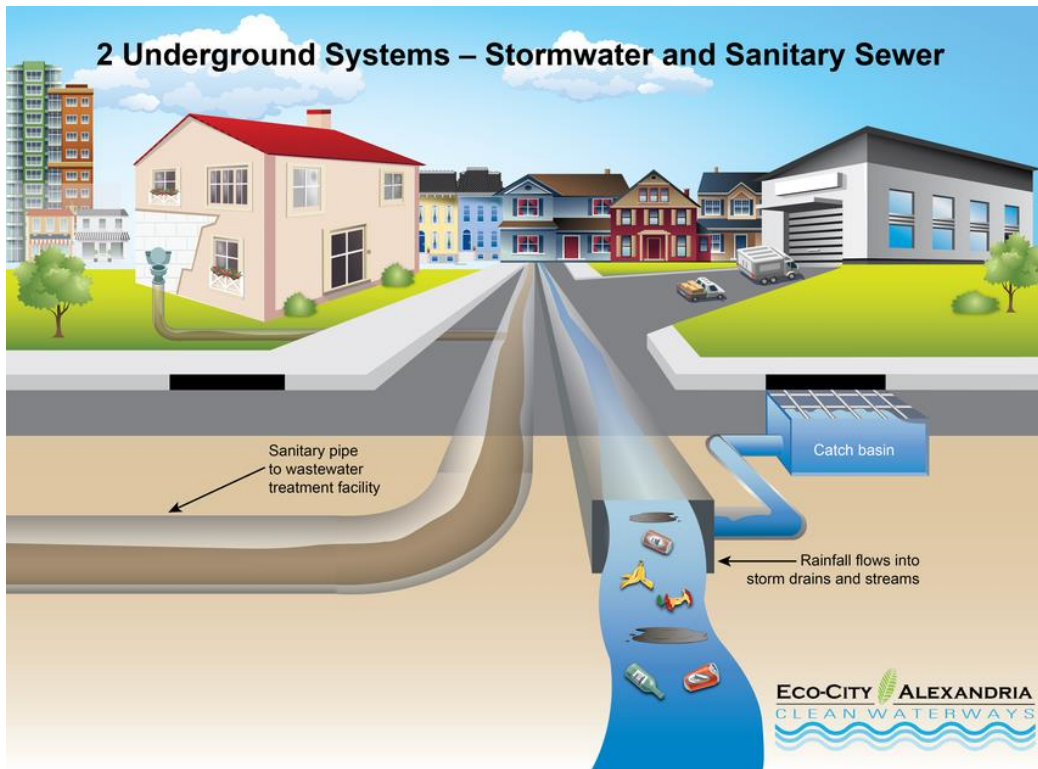
89%

Questions



Overview/CIP Sections to Discuss

- Transportation & Transit
- Sewers



West End Transitway

Key Discussion Items

- Consider the following:
 - The capital projects discussed relative to the overall affordability of the CIP
 - Alignment of these projects with City Council's priorities
 - What 'state of good repair' looks like

City Infrastructure

4 Metrorail
stations

33 bus routes
with 765 bus
stops

560 Lane Miles
of Roads

254 Signalized
Intersections

429 miles of
storm &
sanitary sewer

29 City
Maintained
Bridges

3,500 fire
hydrants

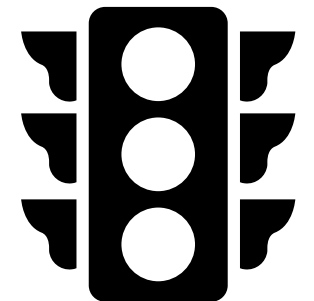
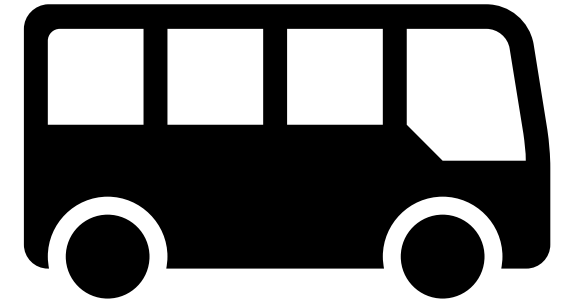
270 Parking
Meters

10,000
streetlights

17 Crosswalks
with flashing
beacons

276 mile of
water mains

319 miles of
sidewalks



Key Performance Indicators

City Strategic Plan

Non-SOV Travel



Increase the percentage of commuters using alternative transportation options

Safety



Reduce the number of:

- *All traffic crashes
- *Severe injury and fatality crashes
- *Pedestrian and bicycle crashes

Environment



Chesapeake Bay Water Pollution Reduction

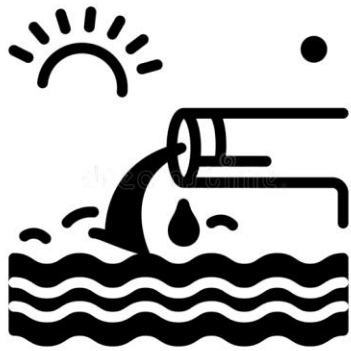
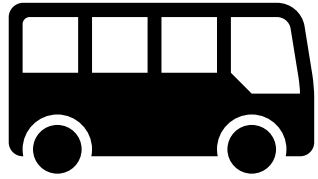
Greenhouse Gas Emissions

State of Good Repair



Increase Alexandria's Pavement Condition Index

Residents' rating of sidewalk conditions



Planned Investment Priorities:

- State of Good Repair
- Meeting Federal & State Mandates
- Public Safety
- Mobility & Congestion Reduction
- Sustainability & Adapting to Climate Change

FY21 – FY30 Transportation Priorities

Where
we plan
to invest



■ Smart Mobility - \$20.1M



■ Other Transit - \$92.5M



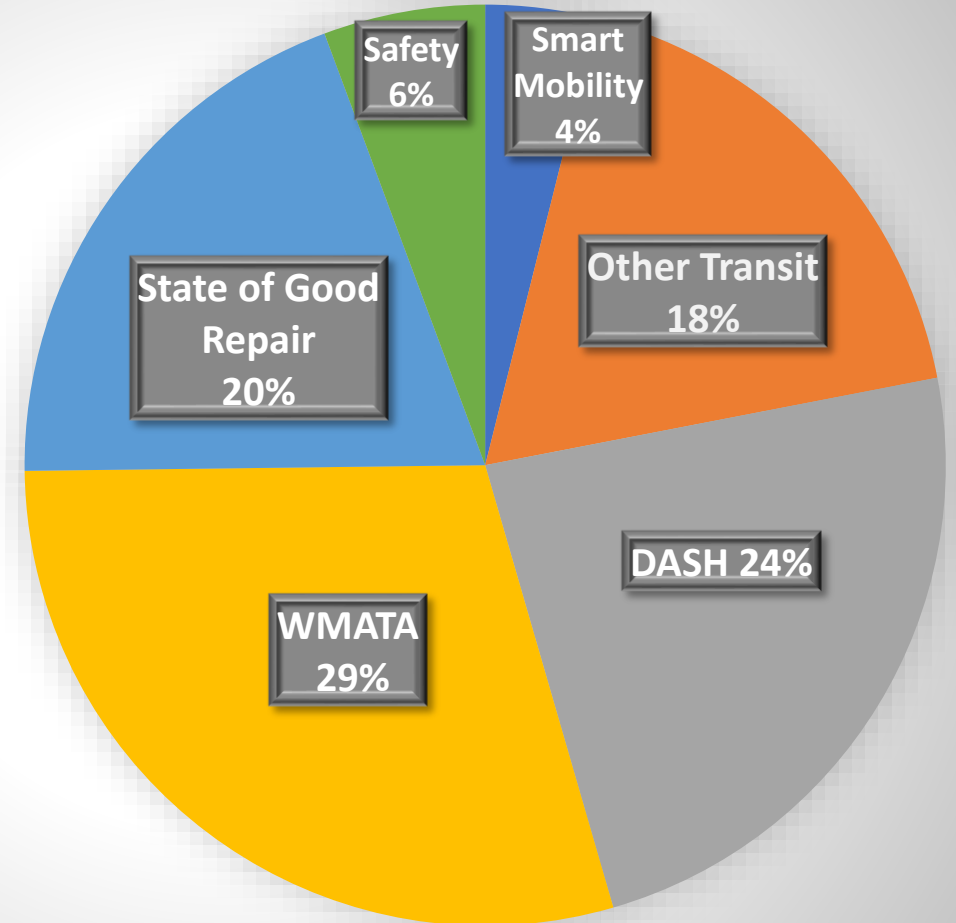
■ DASH - \$120.8M



■ WMATA - \$150.2M

■ State of Good Repair - \$95M

■ Multi-Modal/Safety - \$34M

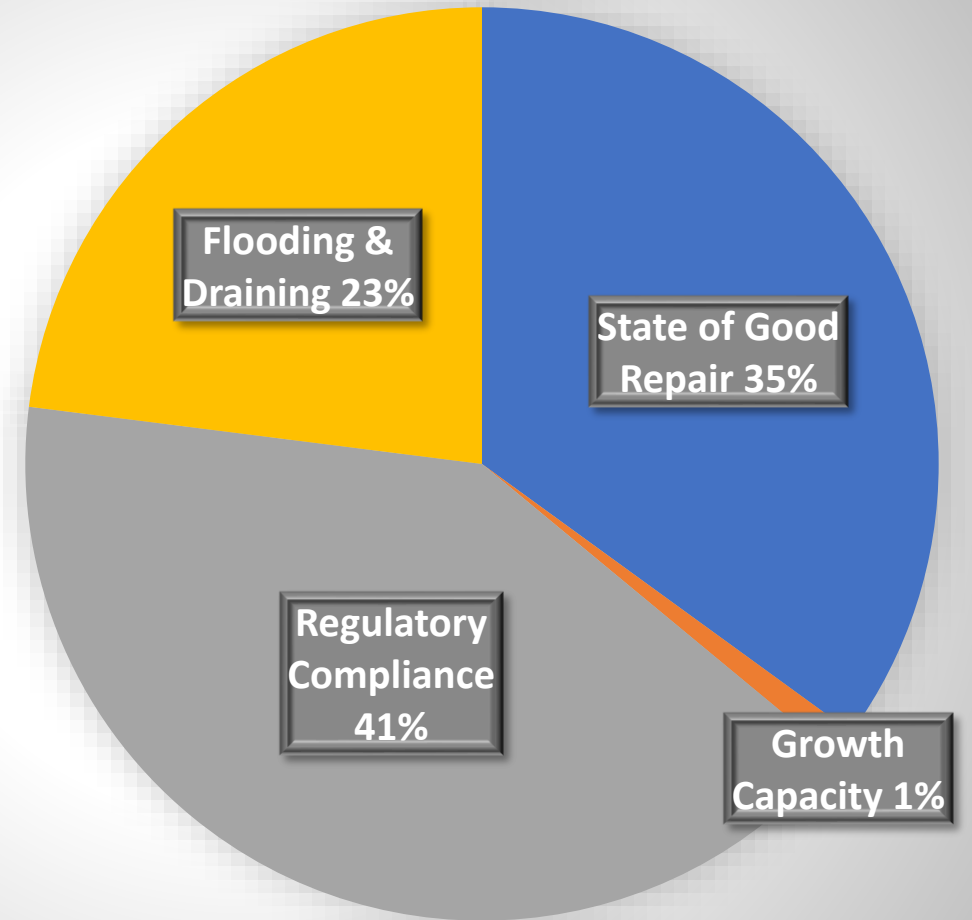


FY21 – FY30 Sewer Priorities

Where
we plan
to invest



- State of Good Repair - \$58.3M
- Future Growth and Capacity - \$2.2M
- Regulatory Compliance - \$68.2M
- Flooding and Drainage - \$38.6M



City Transitways

- ✓ Funding: State & Regional
- ✓ Service Expansion with Economic Development Impact

Corridor A (Metroway)

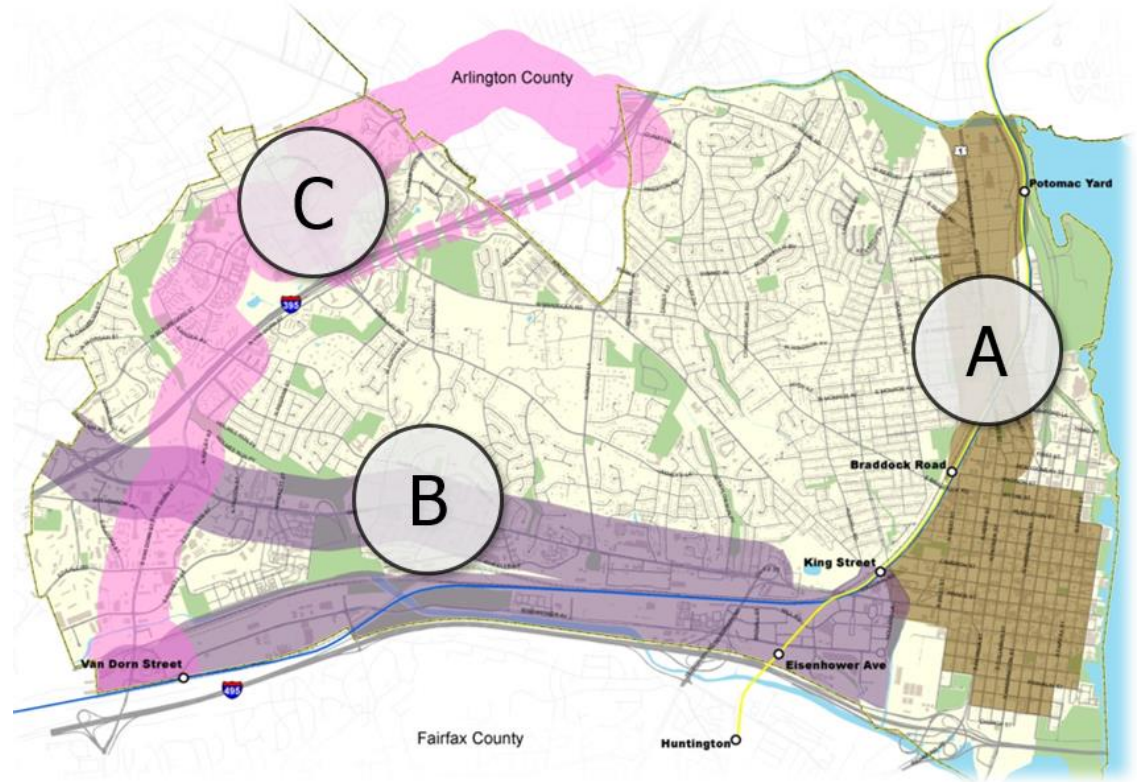
- Awarded \$5m (HQ2) for extension

Corridor B (Duke Street)

- Awarded \$12m for planning
- Requested up to \$75m in FY24-25 NVTA

Corridor C (West End Transitway)

- Awarded \$73m for design, buses, spots
- Awarded \$3M operating (**AT1 Plus**) with I-395 funds, buses every 10 minutes
- Begin Phase 1 design in 2020; operations 2028





WEST END TRANSITWAY

Phase 1:

- \$73m (State/NVTA grants)
- Mostly shared lanes with queue jumps & transit signal priority
- *No dedicated transit lanes*
- 20 new buses
- Begins 2028 (FY 24-45 funds)

Phase 2:

- Full build (pictured)



DASH Electrification

- ✓ Funding: State & Regional
- ✓ State of Good Repair (Replacement follows established schedule)
- 6 Electric Buses from **VW Mitigation Fund** to be delivered mid-2020
- 20 additional Zero-Emission Buses funded:
 - NVTA 70% and SmartScale by FY25
 - 100% of DASH replacement buses to be Zero-Emission by FY27
- Facility & Utility Upgrades starting next year to support Electric fleet
- Total CIP Proposal (Entirely Restricted):
 - \$17M for FY21-26 (Smart Scale, NVTA)
 - \$64M over 10-year CIP lifespan (NVTA 30%)



Drainage, Flooding and Chesapeake Bay Pollution Reduction

- ✓ Funding: Stormwater Utility Fees
- ✓ State of Good Repair & Mandated
- In September, Council approved Phase 2 Bay action plan & City is **ahead of schedule** on meeting mandates
- More intense and frequent rainfall events are leading to significant increases in requests for drainage and flooding
- \$34.6 million programmed in storm sewer resiliency, capacity improvements & drainage/flooding



Bridges

- ✓ Funding: General Fund (Potential VDOT Grants)
- ✓ State of Good Repair: Federally mandated, biannual inspection for 21 city bridges – reportable to VDOT. **All City bridges in satisfactory condition.**
- FY 2019: Long-term maintenance plan developed. New CIP request reflects needs identified in plan:
 - Projected 10-year cost = \$25M (inspection, corrective and preventative work)
- City may cost share for replacement of two Arlington County bridges crossing Four Mile Run
 - Bridges in Arlington's inventory but historical cost sharing
 - City share of West Glebe may be up to \$6M in FY 2021
 - City share of the Arlington Ridge may be up to \$14M (FY 2022-23)
 - Proposal dependent on Arlington cost share of Route 1 and Potomac Avenue









West Glebe Road Bridge



- ✓ Funding: State & Regional
- ✓ Service Expansion with Economic Development Impact

Applying information technology to roads, traffic signals and transit to **manage congestion**, make buses **fast & reliable**, and **optimize** the road space we have



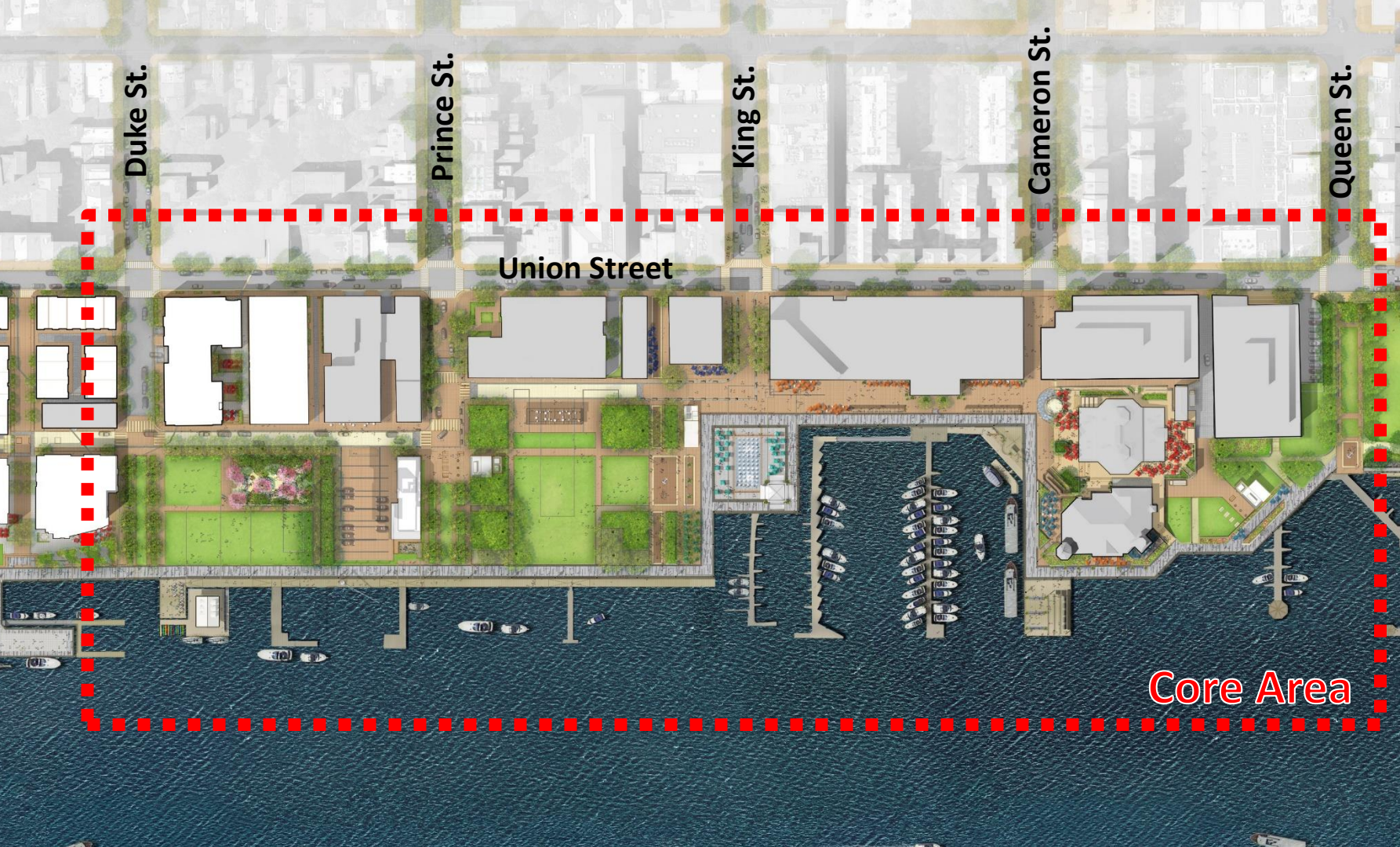
-  TRANSIT
-  PARKING
-  PUBLIC SAFETY
-  ROAD WEATHER
-  MOBILITY ON DEMAND
-  TRAFFIC SIGNALS
-  PERFORMANCE MONITORING
-  INFRASTRUCTURE
-  INFORMATION MANAGEMENT

Smart Mobility Program



Waterfront Implementation

CIP Work Session
November 7, 2019



Duke St.

Prince St.

King St.

Cameron St.

Queen St.

Union Street

Core Area



Duke St.

Prince St.

King St.

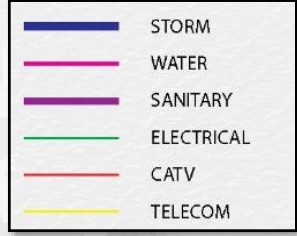
Cameron St.

Queen St.

Union Street

Flood Mitigation





Duke St.

Prince St.

Union Street

King St.

Cameron St.

Queen St.

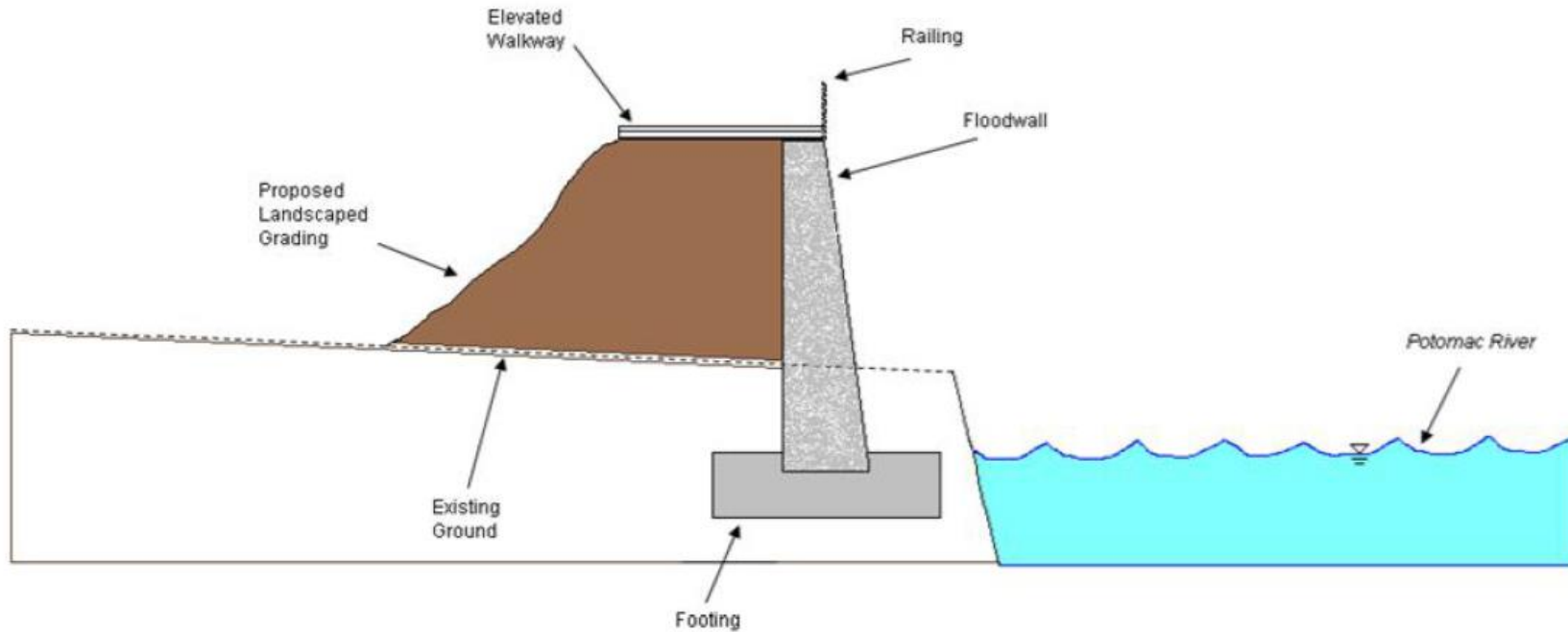
Utilities







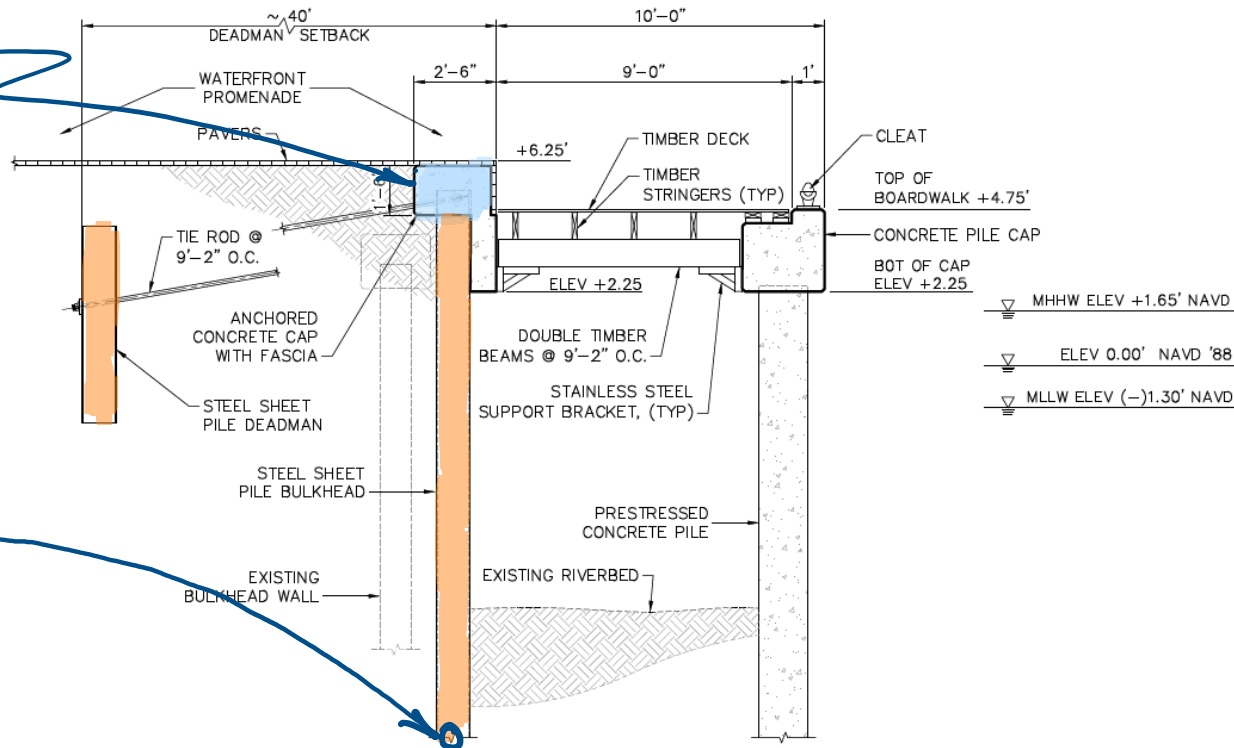
2009 Waterfront Flood Mitigation Study



2014 Schematic Landscape and Flood Mitigation

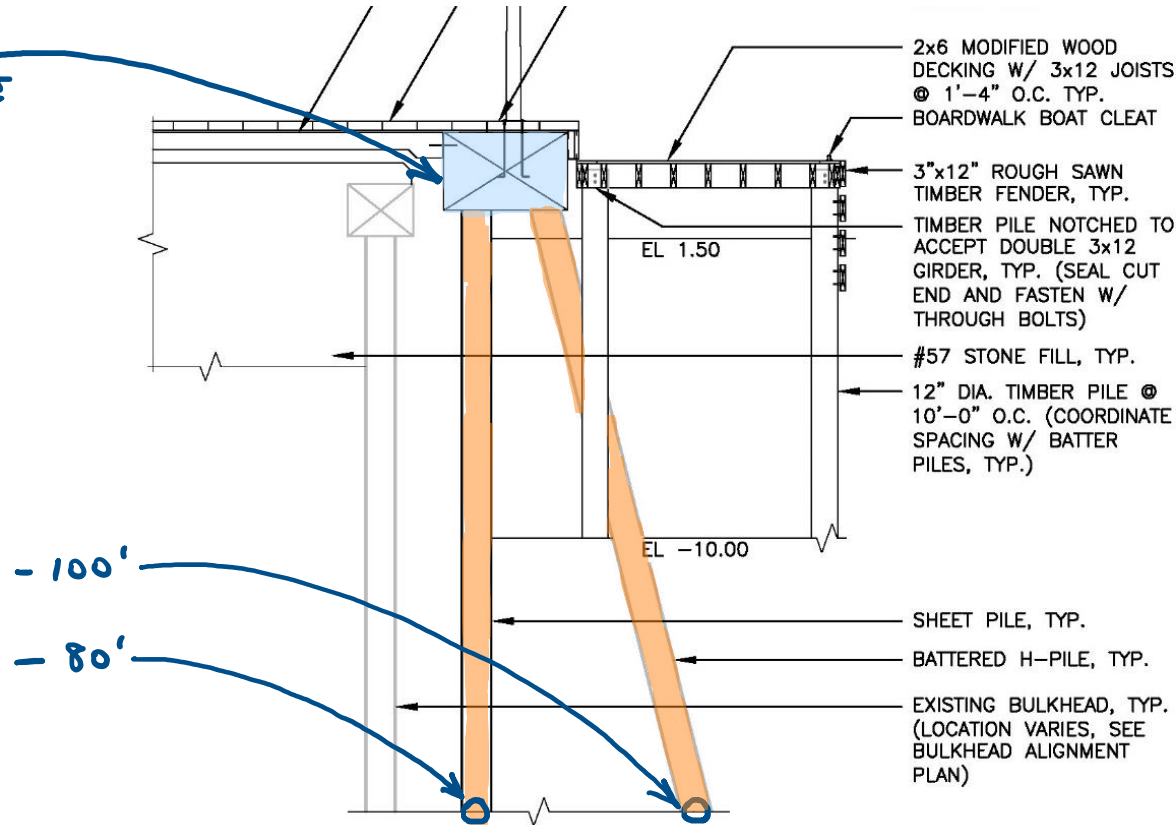


1.5' x 2.5'
CONCRETE
CAP



-60'

2019 – Current Design Concept



Current Program Costs

- Current budget (FY 2021) = \$ 50.2 million
- Funding required = \$ 122.0 million (\$71.8 million add'l)
- Increases from 2016 CIP:
 - Construction cost basis due to scope refinement, new design information, market increases (cost and competition).
 - Escalation to mid-year of construction – 10 years from original estimate.

Cost Drivers – new information

- Geotechnical investigations
- Continued stormwater and pumping design
- Continued bulkhead analysis
- Permitting and mitigation
- Interactive fountain and equipment
- Electrical infrastructure coordination

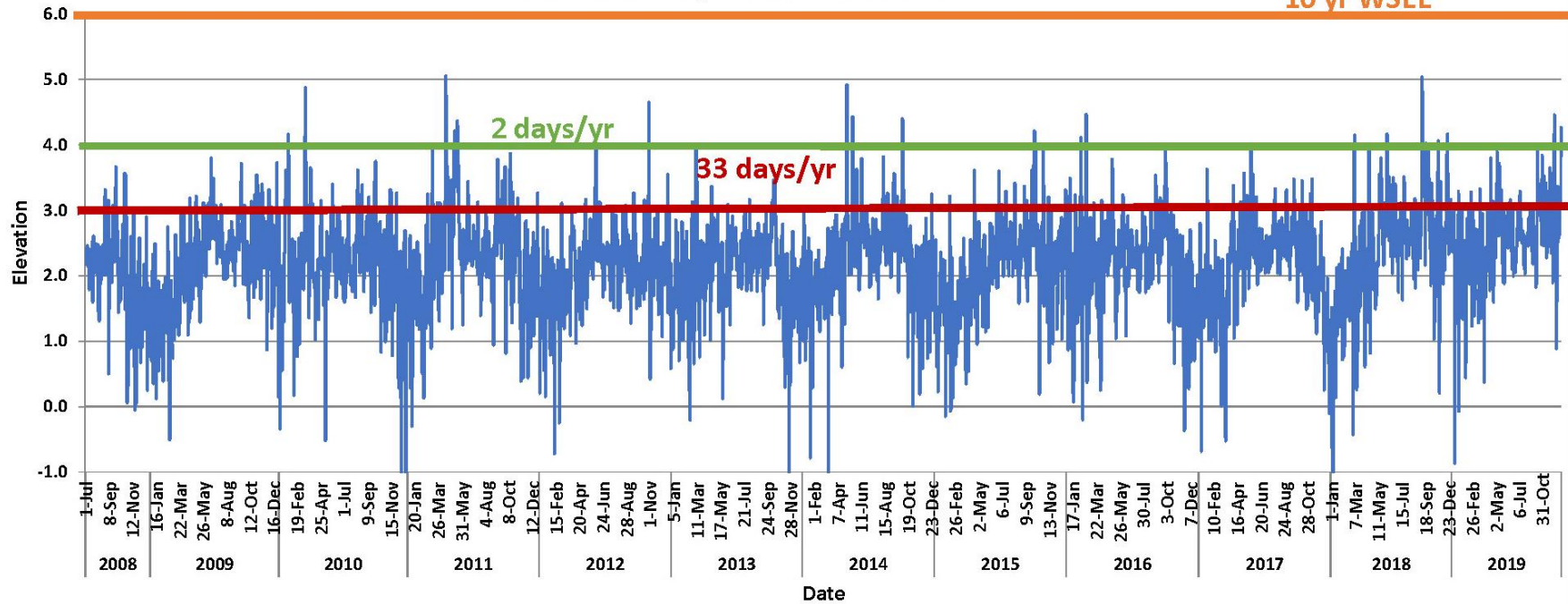
Next Steps

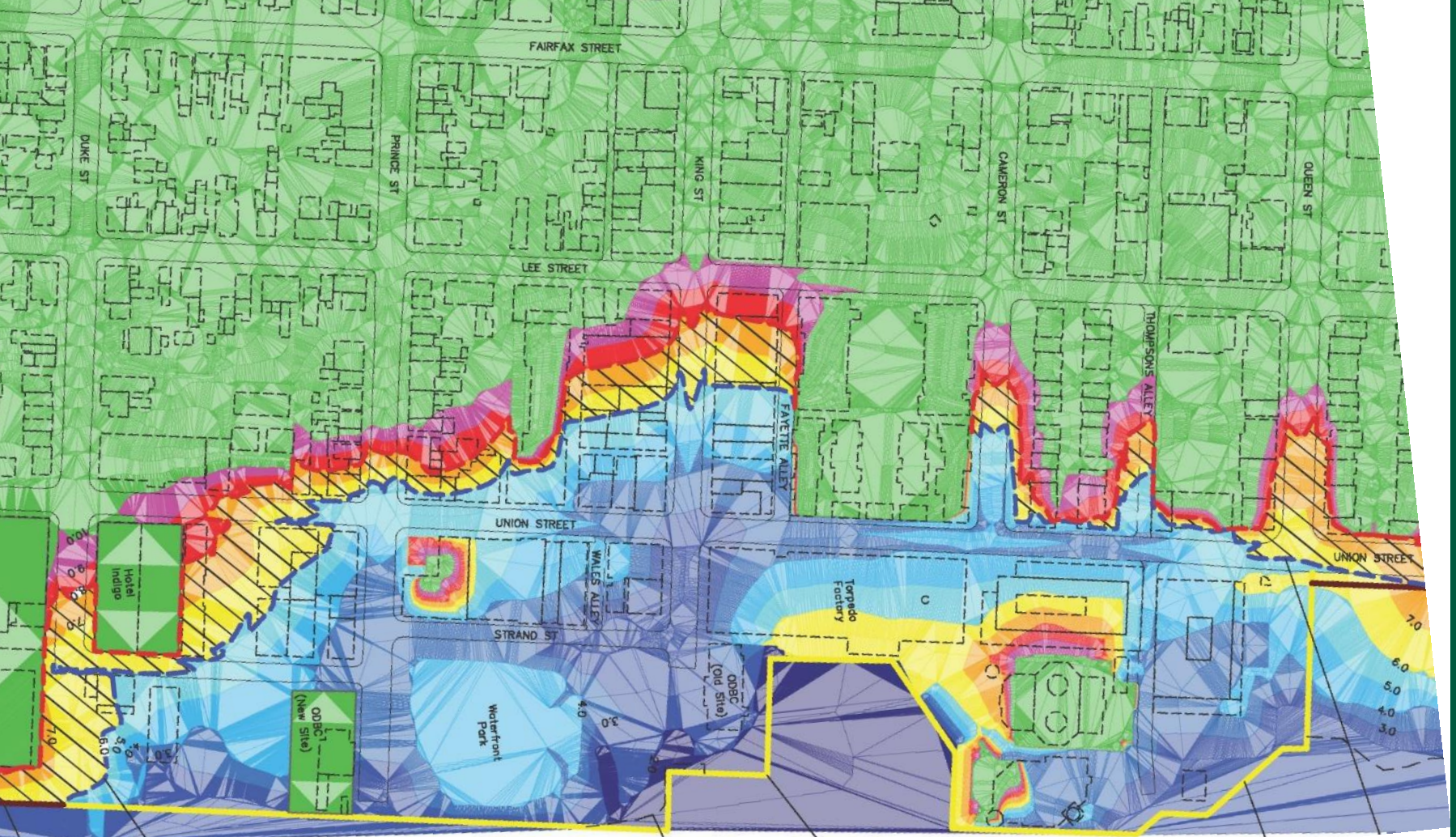
- Continue with Progressive Design-Build (PDB) process.
- Concept review:
 - Resiliency and climate change
 - Current best practices
 - Cost
- Community process to validate project priorities.

USGS River Elevation

July 2008 - Oct 2019

Maximum Daily Water Surface Elevation







Process Schedule

1. Evaluation of project priorities: Dec. 2019 – August 2020
2. Owner-advisor procurement: through February 2020
3. PDB RFP development: Spring 2020 – Late 2020
 - Cost validation
 - Criteria development to qualify PDB
 - Industry outreach
4. PDB procurement: Early 2021 – Late 2021
5. PDB phase 1 (design): 2022
6. Negotiate GMP: Late 2022 / Early 2023
7. PDB phase 2 (construction): Begin 2023